## This Page Is Inserted by IFW Operations and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

## IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

SEQUENCE LISTING/

Pfizer Limited (EP (GB) only), Pfizer Inc. (EP except GB / US / JP)

<120> Phosphodiesterase Enzymes

<130> File reference: PCS10349APME

<140>

<141>

<170> PatentIn Ver. 2.0

<210> 1

<211> 684

<212> PRT

<213> Homo sapiens

<400> 1

Met Leu Lys Gln Ala Ard Arg Pro Leu Phe Arg Asn Val Leu Ser Ala

1

5

10

15

Thr Gln Trp Lys Lys Val Lys Ile Thr Arg Leu Val Gln Ile Ser Gly

20

25

30

Ala Ser Leu Ala Gly Lys Gln Glu Lys His Gln Asp Phe Leu Ile Gln

35

40

45

Arg Gln Thr Lys Thr Lys Asp Arg Arg Phe Asn Asp Glu Ile Asp Lys
50 55 60

Leu Thr Gly Tyr Lys Thr Lys Ser Leu Leu Cys Met Pro Ile Arg Ser
65 70 75 80

Ser Asp Gly Glu Ile Ile Gly Val Ala Gln Ala Ile Asn Lys Ile Pro 85 90 95

Glu Gly Ala Pro Phe Thr Glu Asp Asp Glu Lys Val Met Gln Met Tyr

100 105 110

Leu Pro Phe Cys Gly Ile Ala Ile Ser Asn Ala Gln Leu Phe Ala Ala 115 120 125

Ser Arg Lys Glu Tyr Glu Arg Ser Arg Ala Leu Leu Glu Val Val Asn 130 135 140

Met His Arg Ala Gln Thr Leu Leu Lys Cys Glu Arg Cys Ser Val Leu

165 170 175

Leu Leu Glu Asp Ile Glu Ser Pro Val Val Lys Phe Thr Lys Ser Phe
180 185 190

Glu Leu Met Ser Pro Lys Cys Ser Ala Asp Ala Glu Asn Ser Phe Lys
195 200 205

Glu Ser Met Glu Lys Ser Ser Tyr Ser Asp Trp Leu Ile Asn Asn Ser Ile Ala Glu Leu Val Ala Ser Thr Gly Leu Pro Val Asn Ile Ser Asp Ala Tyr Gln Asp Pro Arg Phe Asp Ala Glu Ala Asp Gln Ile Ser Gly Phe His Ile Arg Ser Val Leu Cys Val Pro Ile Trp Asn Ser Asn His Gln Ile Ile Gly Val Ala Gln Val Leu Asn Arg Leu Asp Gly Lys Pro Real III Franchish III III Phe Asp Asp Ala Asp Gln Arg Leu Phe Glu Ala Phe Val Ile Phe Cys Gly Leu Gly Ile Asn Asn Thr Ile Met Tyr Asp Gln Val Lys Lys Ser Trp Ala Lys Gln Ser Val Ala Leu Asp Val Leu Ser Tyr His Ala Thr Cys Ser Lys Ala Glu Val Asp Lys Phe Lys Ala Ala Asn Ile Pro Leu Val Ser Glu Leu Ala Ile Asp Asp Ile His Phe Asp Asp Phe Ser Leu

Asp Val Asp Ala Met Ile Thr Ala Ala Leu Arg Met Phe Met Glu Leu 370 375 380

Gly Met Val Gln Lys Phe Lys Ile Asp Tyr Glu Thr Leu Cys Arg Trp
385 390 395 400

Leu Leu Thr Val Arg Lys Asn Tyr Arg Met Val Leu Tyr His Asn Trp
405 410 415

Arg His Ala Phe Asn Val Cys Gln Leu Met Phe Ala Met Leu Thr Thr
420 425 430

Ala Gly Phe Gln Asp Ile Leu Thr Glu Val Glu Ile Leu Ala Val Ile
435 440 445

Val Gly Cys Leu Cys His Asp Leu Asp His Arg Gly Thr Asn Asn Ala 450 455 460

Phe Gln Ala Lys Ser Gly Ser Ala Leu Ala Gln Leu Tyr Gly Thr Ser
465 470 475 480

Ala Thr Leu Glu His His His Phe Asn His Ala Val Met Ile Leu Gln
485 490 495

Ser Glu Gly His Asn Ile Phe Ala Asn Leu Ser Ser Lys Glu Tyr Ser

500 505 510

Asp Leu Met Gln Leu Leu Lys Gln Ser Ile Leu Ala Thr Asp Leu Thr
515 520 525

Leu Tyr Phe Glu Arg Arg Thr Glu Phe Phe Glu Leu Val Ser Lys Gly
530 535 540

Glu Tyr Asp Trp Asn Ile Lys Asn His Arg Asp Ile Phe Arg Ser Met
545 550 555 560

Leu Met Thr Ala Cys Asp Leu Gly Ala Val Thr Lys Pro Trp Glu Ile
565 570 575

Ser Arg Gln Val Ala Glu Leu Val Thr Ser Glu Phe Phe Glu Gln Gly

580
585
590

Asp Arg Glu Arg Leu Glu Leu Lys Leu Thr Pro Ser Ala Ile Phe Asp
595 600 605

Arg Asn Arg Lys Asp Glu Leu Pro Arg Leu Gln Leu Glu Trp Ile Asp 610 615 620

Ser Ile Cys Met Pro Leu Tyr Gln Ala Leu Val Lys Val Asn Val Lys
625 630 635 640

Leu Lys Pro Met Leu Asp Ser Val Ala Thr Asn Arg Ser Lys Trp Glu

645 650 655

Glu Leu His Gln Lys Arg Leu Leu Ala Ser Thr Ala Ser Ser Ser Ser 660 665 670

Pro Ala Ser Val Met Val Ala Lys Glu Asp Arg Asn
.
675
680

<210> 2

<211> 2078

<212> DNA

<213> Homo sapiens

<400> 2

ggtccgagat gctgaagcag gcaagaagac ctttattcag aaatgtgctc agtgccacac 60 agtggaaaaa ggtgaaaatc acaagactgg tccaaatctc tggggcctct ttggctgaaa 120 aacaggaaaa gcaccaggat tttcttatac agaggcaaac aaaaacaaag gatcgacgat 180 tcaatgatga aatcgacaag ctgactggat acaagacaaa atcattattg tgcatgccta 240 tccgaagcag tgatggtgag attattggtg tggcccaagc gataaataag attcctgaag 300 gagetecatt taetgaagat gatgaaaaag ttatgeagat gtatetteea ttttgtggaa 360 tegecatate taaegeteag etetttgetg eeteaaggaa agaatatgaa agaageagag 420 ctttgctaga ggtggttaat gacctctttg aagaacagac tgacctggag aaaattgtca 480 agaaaataat gcatcgggcc caaactctgc tgaaatgtga gcgctgttct gttttactcc 540 tagaggacat cgaatcacca gtggtgaaat ttaccaaatc ctttgaattg atgtccccaa 600 agtgcagtgc tgatgctgag aacagtttca aagaaagcat ggagaaatca tcatactccg 660 actggctaat aaataacagc attgctgagc tggttgcttc aacaggcctt ccagtgaaca 720 tcagtgatgc ctaccaggat ccgcgctttg atgcagaggc agaccagata tctggttttc 780 acataagatc tgttctttgt gtccctattt ggaatagcaa ccaccaaata attggagtgg 840 ctcaagtgtt aaacagactt gatgggaaac cttttgatga tgcagatcaa cgactttttg 900 aggettttgt eatettttgt ggaettggea teaacaacae aattatgtat gateaagtga 960 agaagteetg ggeeaageag tetgtggete ttgatgtget ateataceat geaacatgtt 1020 caaaagctga agttgacaag tttaaggcag ccaacatccc tctggtgtca gaacttgcca 1080 tegatgaeat teattttgat gaettttete tegaegttga tgeeatgate acagetgete 1140 tccggatgtt catggagctg gggatggtac agaaatttaa aattgactat gagacactgt 1200 gtaggtggct tttgacagtg aggaaaaact atcggatggt tctataccac aactggagac 1260 atgeetteaa egtgtgteag etgatgtteg egatgttaae eactgetggg ttteaagaea 1320 ttctgaccga ggtggaaatt ttagcggtga ttgtgggatg cctgtgtcat gacctcgacc 1380

acaggggaac caacaatgcc ttccaagcta agagtggctc tgccctggcc caactctatg 1440 gaacctctgc taccttggag catcaccatt tcaaccacge cgtgatgatc cttcaaagtg 1500 agggtcacaa tatctttgct aacctgtcct ccaaggaata tagtgacctt atgcagcttt 1560 tgaagcagtc aatattggca acagacctca cgctgtactt tgagaggaga actgaattct 1620 ttgaacttgt cagtaaagga gaatacgatt ggaacatcaa aaaccatcgt gatatattc 1680 gatcaatgtt aatgacagcc tgtgaccttg gagccgtgac caaaccgtgg gagatctcca 1740 gacaggtggc agaacttgta accagtgagt tcttcgaaca aggagatcgg gagagattag 1800 agctcaaact cactcctca gcaatttttg atcggaaccg gaaggatgaa ctgcctcggt 1860 tgcaactgga gtggattgat agcatctgca tgcctttgta tcaggcactg gtgaaggtca 1920 acgtgaact gaagccgatg ctagattcag tagctacaaa cagaagtaag tgggaaggc 1980 tacaccaaaa acgactgctg gcctcaactg cctcatcctc ctccctgcc agtgttatgg 2040 tagccaagga agacaggaac taataactcg aggcatgc